



Dehydrated Culture Media
Bases / Media Supplements

Technical Information

Antibiotic Assay Medium No.20 (Yeast Beef Broth)

Product Code: DM 1167

Application: Antibiotic Assay Medium No. 20 is used for the microbiological assay of Amphotericin B using *Candida tropicalis*.

Composition**

Ingredients	Gms / Litre
Casein enzymic hydrolysate	10.000
Peptic digest of animal tissue (Peptone)	5.000
Yeast extract	6.500
Beef extract	1.500
Dextrose	11.000
Sodium chloride	3.500
Dipotassium phosphate	3.680
Monopotassium phosphate	1.320
Final pH (at 25°C)	6.6±0.2

**Formula adjusted, standardized to suit performance parameters

Principle & Interpretation

Antibiotic Assay media are used in the performance of antibiotic assays. Grove and Randall have published details of those antibiotic assays and media in international journal on antibiotic assays ⁽¹⁾. The use of antibiotic assay medium for the liquid formulation used in the performance of antibiotic assay has also been reported other worker ⁽²⁾. These media are prepared according to the USP ⁽³⁾ FDA ⁽⁴⁾ guidelines. Antibiotic Assay Medium No. 20 is used for turbidometric assay of Amphotericin B using *Candida tropicalis* ATCC 13803 as test organism. This medium is also known as Yeast beef broth. This medium is also used in assaying mycostatic activity in pharmaceutical related preparations. High nutritional content like peptic digest of animal tissue, yeast extract, beef extract and casein enzymic hydrolysate provides excellent medium for growth of *Candida tropicalis*. Dextrose provides carbon and energy for growth of the organism. Osmotic equilibrium to maintain cell integrity and viability is provided by sodium chloride, while phosphate functions to provide proper buffering action. Turbidimetric antibiotic assay is based on the change or inhibition of growth of a test microorganisms in a liquid medium containing a uniform concentration of an antibiotic. After incubation of the test organism in the working dilutions of the antibiotics, the amount of growth is determined by measuring the light transmittance using spectrophotometer. The concentration of antibiotic is determined by comparing amounts of growth obtained with that given by the reference standard solutions. Use of this method is appropriate only when test samples are colourless.

Methodology

Suspend 42.5 grams of powder media in 1000 ml distilled water. Shake well and heat if necessary to dissolve the medium completely. Sterilize by autoclaving at 15 lbs pressure (121°C) for 15 minutes. Cool and dispense as desired.

Quality Control

Physical Appearance

Cream to yellow homogeneous free flowing powder

Colour and Clarity of prepared medium

Medium amber coloured clear solution

Reaction

Reaction of 4.25% w/v aqueous solution at 25°C. pH : 6.6±0.2



pH Range:- 6.40-6.80

Cultural Response/Characteristics

DM1167: Cultural characteristics observed after an incubation at 35-37°C for 18-48 hours.

Organism

Candida tropicalis
ATCC luxuriant13803

Growth

luxuriant

Storage and Shelf Life

Dried Media: Store below 30°C in tightly closed container and use before expiry date as mentioned on the label.

Prepared Media: 2-8⁰ in sealable plastic bags for 2-5 days.

Further Reading

1. Grove and Randall, 1955, Assay Methods of Antibiotics Medical Encyclopedia, Inc, New York.
2. Schmidt and Moyer, 1944; J. Bact, 47:199.
3. United States Pharmacopoeia/ National Formulary (USP 28/NF 23), 2005. US Pharmacopeial Convention Inc, Rockville, Md.
4. Tests and Methods of Assay of Antibiotics and Antibiotic containing Drugs, FDA, CFR, 1983. Title 21, part 436, Subpart D, Was hington, D.C. U.S Government printing office, paragraphs 436, 100-436, 106 pg 242-259 (April 1).

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conform solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
- Products are not intended for human or animal diagnostic or therapeutic use but for laboratory, research or further manufacturing of diagnostic reagents extra.
- Statements contained herein should not be considered as a warranty of any kind, expressed or implied, and no liability is accepted for infringement of any patents.
- Do not use the products if it fails to meet specificatons for identity and performens parameters.